

PURPOSE OF AND NEED FOR THE PLAN



Table 2: Summary of Impacts

INTRODUCTION

The purpose of the federal action is to adopt a general management plan (GMP) for the newly established Mojave National Preserve created in 1994 by the California Desert Protection Act. The goal of the general management plan is to determine how best to manage the new unit to meet the Congressional intent as expressed in the California Desert Protection Act and the mission of the National Park Service.

General management plans provide the overall management strategy for approximately 10–15 years. More detailed activity or implementation plans are prepared after this plan is approved. General management plans are broad in scope rather than specific, and focus on purposes of the unit, its significant attributes, its mission in relation to the overall mission of the agency, activities that are appropriate within these constraints, and resource protection strategies. They also provide guidelines for visitor use and development of facilities for visitor enjoyment and administration.

A land protection plan and a development concept plan for the Kelso Depot are included as components of this planning effort. The land protection plan (appendix C) provides the management strategy for nonfederal lands and interests that occur within the boundary of the preserve. Nearly 230,000 acres of the preserve are in private, local, or state ownership. The Kelso Depot development concept plan provides details regarding the proposal to restore the depot for use as a museum and interpretive facility. Section 512 of the California Desert Protection Act requires that the management plan address the feasibility of using the depot for interpretation, education and scientific purposes.

The National Parks and Recreation Act of 1978 (P. L. 95-625) requires the National Park Service to prepare general management plans for each park unit. The act specifies that general management plans address measures for the preservation of the area's resources, the types and general intensities of development, visitor carrying capacities and potential boundary modifications. This proposed general management plan addresses these issues, except for boundary modifications. During the prolonged debate over the creation of the Mojave National Preserve the boundaries were subjected to considerable scrutiny and public debate. The National Park Service believes a comprehensive examination of potential boundary modifications at this time is unwarranted and should be delayed until the National Park Service has managed the area with the existing boundaries for several years to determine if there are areas where adjustments are justified.

BRIEF DESCRIPTION OF MOJAVE NATIONAL PRESERVE

Mojave National Preserve is a vast expanse of desert lands that represents a combination of Great Basin, Sonoran and Mojave desert ecosystems. This combination allows a visitor to experience a wide variety of desert plant life in combinations that exist nowhere else in the United States in such close proximity.

Located in southern California, the desert area is a land of mountain ranges, sand dunes, great mesas and extinct volcanoes. The preserve contains several diverse mountain ranges, the Kelso dune system, dry lake beds and evidence of volcanic activity (domes, lava flows, cinder cones). Plant and animal life complement the geological features. The preserve contains the finest Joshua tree forest in the world. Providence Mountain State Recreation Area (Mitchell Caverns), the University of California's Granite Mountains Natural Reserve, and California State University's Desert Studies Center at Soda Springs are also within the boundaries.

Mojave is bounded to the north and south by major interstate highways, I-15 and I-40. The Nevada-California state line makes up most of the eastern boundary. Located about half way between Las Vegas and Joshua Tree National Park, it is an area that many people have seen through their windshields but few have taken time to explore.

Of the preserve's 1.6 million acres, about 700,000 acres are legislated wilderness. In addition, about half is designated as critical habitat for the federally listed threatened desert tortoise.

Evidence of the early human uses includes archeological sites, possibly dating back to 12,000 years. Historic features, such as mail and trade/travel routes, ranching, farming and mining, are abundant and often well preserved. The old Union Pacific train depot at Kelso serves as a wonderful reminder the railroading hey-days of the 1920s'. The collection of buildings at Soda Springs, called Zzyzx, built by "Doc" Springer also has a remarkably interesting tale to tell of this most unusual man. These two features and many more, such as Fort Piute, Government Holes, and Ivanpah town sites add to the very rich history of the preserve.

FIGURE 1. REGION

MISSION

Mojave National Preserve Mission: Mojave National Preserve was established to preserve outstanding natural, cultural, and scenic resources while providing for scientific, educational, and recreational interests.

NPS Mission: The National Park Service is “dedicated to conserving unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education, and inspiration of this and future generations. The Service is also responsible for managing a great variety of national and international programs designed to help extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world” (NPS, 1996).

PURPOSE AND SIGNIFICANCE

An essential part of this planning process is understanding the purpose and significance of the land for which the plan is being prepared. For federal lands, Congress provides the purpose(s) of the area and the mission of the agency charged with managing the area. Experts familiar with the natural and cultural resources of the region usually determine significance, although some significant elements are often recognized in the enabling legislation.

MOJAVE NATIONAL PRESERVE PURPOSE

- Preserve and protect the natural and scenic resources of the Mojave Desert, including transitional elements of the Sonoran and Great Basin deserts.
- Preserve and protect cultural resources representing human use associated with Native American cultures and westward expansion.
- Provide opportunities for compatible outdoor recreation and promote understanding and appreciation of the California desert.

MOJAVE NATIONAL PRESERVE SIGNIFICANCE

- Mojave National Preserve is the best place to experience the extensive variety of habitats, species, and landforms unique to the Mojave Desert.
- Mojave National Preserve contains outstanding scenic resources, rich in visual diversity containing a varied landscape of sand dunes, mountain ranges, dry lake beds, lava flows, cinder cones, Joshua tree forests, and far-reaching vistas.

- The Mojave Desert has a long cultural history as a traveled corridor across a harsh and foreboding desert, linking different areas in the Southwest. During the late 19th and early 20th centuries, railroads were constructed in this historic transportation corridor; more recently, modern interstate highways traverse the area.
- The Joshua tree forest of Cima Dome and Shadow Valley is the largest and densest population of Joshua trees in the world.
- Mojave National Preserve contains an extensive variety of habitats and species representative of the Mojave Desert.
- The preserve is internationally known as a place to conduct desert research, and its lands are known for their geological features such as Cima Dome, the Cinder Cones, and the Kelso Dunes.
- Historic Kelso Depot is associated with the early 20th century heyday of the great steam locomotives and the establishment of the final major rail crossings of the Mojave Desert. The Kelso Depot, built in 1924, is a rare surviving example of a combined depot, railroad restaurant, and employees' rooming house.

PRIMARY INTERPRETIVE THEMES

The National Park Service identifies major themes that are used to guide the development of interpretive materials (signs, brochures, walks, talks, etc.). Major themes are those elements that each visitor should develop an understanding of during their visit. These themes would be used by Mojave staff to develop an interpretive plan for the preserve.

- Mojave National Preserve is a combination of three desert ecosystems: the Mojave, Great Basin, and Sonoran Deserts.
- The diverse landforms of Mojave National Preserve were created by dramatic geologic forces that continue to shape this desert environment.
- The diverse species of this desert region have evolved many adaptations to survive the extreme climate and scarcity of water.
- Deserts are often viewed as vast, seemingly barren wastelands, but in fact, they are fragile, arid ecosystems with a diversity of life forms.
- The fragile desert environment of Mojave National Preserve is easily impacted by human activities – even human footprints affect the land in many different and lasting ways.
- Mojave National Preserve contains archeological and historic sites and resources that document a continuum of 12,000 years of human presence in this desert region.

- The vastness and remoteness of the preserve offer a sense of solitude and opportunities for exploring a land of diverse mountain ranges, sand dunes, extinct volcanoes, and mesas.

MANAGEMENT OBJECTIVES

- Seek to protect significant natural and cultural resources and values, including geologic features, and to foster an improved understanding of natural processes through monitoring efforts and scientific research.
- Manage desert resources, including wilderness, for maximum statutory protection provided for under the law.
- Participate cooperatively in the preservation of ecological resources that extend beyond the preserve's boundaries.
- Manage visitor use in a manner that promotes exploration and self-discovery, while protecting resources from overuse.
- Educate visitors regarding the NPS mission and the natural and cultural resources of the preserve.
- Improve the effectiveness of operations and administration.
- Work actively with authorized users, including military overflights, to reduce noise impacts and perpetuate the sense of solitude for visitors.
- Perpetuate scenic landscapes. Landscapes viewed from scenic road corridors and developed areas should be free from recreational activities and facilities that distract from the scenic beauty of the landscape.
- Protect wilderness values and the wilderness experience in areas congressionally designated as wilderness.
- Perpetuate a sense of exploration and discovery.
- Perpetuate visitors' ability to view a nearly pristine night sky untainted by artificial light sources.
- Find creative ways to increase the accessibility of NPS programs, facilities and experiences in a reasonable manner. Provide access for all segments of the population, including visitors with disabilities, small children, senior citizens, and populations that generally do not use national parks, in coordination with the laws requiring the National Park Service to

preserve and protect wilderness and cultural and natural resources for the enjoyment of future generations.

- Pursue mutually supportive partnerships with representatives from gateway communities and local and tribal governments. Consider ways in which communities and the parks can support each other. Promote economic growth of communities in ways that complement the preserve's management objectives.

CARRYING CAPACITY

A widely accepted definition of carrying capacity is: "the character of use that can be supported over a specific time by an area developed at a certain level without causing excessive damage to either the physical environment or the experience of the visitor." That level of development can range from none to extensive amounts of infrastructure to support visitor uses.

There are three principal components that relate to determining the carrying capacity for a national park:

- The ecological or physical capabilities of the natural and cultural resources to sustain certain levels of visitor use without reaching unacceptable levels of damage. Each landscape may have varying abilities to absorb different kinds of and levels of visitor use before unacceptable levels of impacts occur.
- The sociological carrying capacity is the ability of visitors to enjoy and appreciate these resources without interference by other visitors. Determining social carrying capacity can be one of the most difficult parts of the three components. Sheer numbers relating to visitation in an area are not a valid determinant of a quality visitor experience. Other factors such as visitor behavior, preconceived expectations and social norms of the dominant user group can affect visitor enjoyment.
- The type and amount of NPS management that has been, or can be applied to the activity to mitigate unwanted impacts are also a factor. This component relates to the management of such things as roads, parking lots, buildings, trails, and visitor information. For example, providing interpretive services is an effective way to instill in the visitors an understanding and appreciation for the park resources. Such understanding helps implement carrying capacity for a particular area. Limiting parking in certain areas can effectively limit visitation.

The current carrying capacity for Mojave National Preserve must generally be assumed to be at a low to moderate level because the staff available to monitor resources and visitor activities is limited. Because the contact between NPS staff and visitors is rare, opportunities for offering information and interpretation are limited. More opportunities to present information to visitors could help reduce the potential for unwanted effects on natural and

cultural resources. Fortunately, preliminary information indicates that most visitors stay on paved roads, which reduces the potential for impacts on resources. Implementing the recommendations called for in this plan would increase the protection of fragile or sensitive resources.

Because Mojave National Preserve is a relatively new unit of the National Park Service, few pertinent data are available that could be used to determine specific standards or indicators for the carrying capacity of specific areas. Therefore, it is impractical to establish specific standards of acceptability and indicators of quality at this time. NPS managers should manage visitor activities in a manner that leans towards resource protection. Future data-gathering efforts would further help define the carrying capacity of each area within the preserve.

General management plans provide NPS managers with management direction on a broad, prescriptive level. Management objectives for carrying capacity are thus written as narrative statements. These statements define the desired future visitor experience and resource conditions in qualitative terms such as “sense of seclusion,” or “low degree of tolerance for resource degradation.” These qualitative descriptors, which have been identified as “desired visitor experience and resource conditions,” would be refined and translated into quantitative standards during future implementation planning. As previously mentioned, indicators and standards of quality for both the physical and social environments would be developed within future implementation plans. These products would be quantifiable and measurable aspects of the carrying capacity process.

DESIRED FUTURE CONDITIONS

Desired future conditions for natural and cultural resources and the visitor experiences are described below. The descriptions are qualitative in nature and can be translated into quantitative standards over time during the implementation of this plan. Some descriptions could be applied to broad areas such as wilderness, while others apply to smaller areas such as road corridors and points of development. These descriptions serve as guides for managing the land and facilities to achieve desired carrying capacities.

NATURAL AREAS

An informal, self-guided learning experience is provided for visitors in these areas. People are encouraged to get out of their vehicles and walk to features. The pace is slow with low to moderate levels of noise. Visitors typically focus on specific resources with few visual intrusions. Visitors experience a sense of learning through onsite interpretation or other means.

The length of stay at each site is relatively short in comparison to the time visitors spend in the preserve. There is a moderate amount of social crowding and moderate interaction at points of interest and along dead-end trails. Guided ranger walks are occasionally provided

for visitors at some locations. Development is limited to items such as low interpretive panels, small directional signs, and hardened dirt paths. Fences are used as a last resort to protect resources if other management efforts do not work. The tolerance for resource degradation is low to moderate, depending on the sensitivity of the resource. The degree of onsite visitor and resource management is moderate and increases or decreases with visitation levels.

WILDERNESS

Visitors in this landscape experience a primeval environment largely untouched by people. Some sections of wilderness within the preserve have remnants of human occupation, but these are considered a part of the scenery to be explored. A high degree of physical exertion is required to hike or ride horseback to this area. A minimal number of hiking trails are present, often requiring a person to travel cross-country to get to a desired destination. Abandoned roads may also be used as routes of travel. Opportunities for independence, closeness to nature, tranquility, and the application of outdoor skills are high. Opportunities for social interaction with other visitors are low, as is the probability of encountering NPS employees. Likewise, evidence of other visitors is minimal.

The landscape offers a high degree of challenge and adventure for visitors. The visual quality of the landscape contributes significantly to the visitor experience and needs to be protected. The tolerance for resource degradation is low, with the exception of designated trail corridors, where a slightly higher level of degradation is allowed within a few feet of the trail and at points where camping occurs. A minimal amount of resource and visitor management is present. Offsite visitor management (provision of information) is low to moderate.

HISTORIC PRESERVATION AREAS

Historic preservation areas offer visitors a chance to gain a sense of the past by using as many of their senses possible without compromising the integrity of the resource. Often there are opportunities to learn by vicariously experiencing the emotions and thoughts of those who lived in the past. The experience is often a visual one, with feelings gained by physical spaces, smells, and sounds adding to the whole experience. Interpretive information adds color and meaning to the experience.

The degree of tolerance for resource degradation is low for historic resources. The chance of seeing other visitors and having social interaction is potentially high, depending on the degree of public access and visitor interest. The opportunity for contact with NPS personnel is high where ranger-led tours are offered. Visitor behavior is managed to protect the character of each place. NPS onsite management is high at sites with high visitation and impact sensitivity. Paved walks, fences, and interpretive panels are used as needed to accommodate public access and interest. If interest is high, improvements may be needed to allow visitors to experience these resources while protecting them from visitor use impacts. Improvements must not distract from the significance of each location. Some features are convenient and easily accessible with little need for visitors to exert themselves, apply outdoor skills, or make

a long time commitment to see the area. Some features are at remote locations and would require more effort and skill to experience. Adventure is often a part of the visitor experience at these places. The way in which people currently gain access to these locations should remain unchanged since this experience contributes to resource protection and its appreciation. Changes in access should only be made if there is strong justification to do so. Remote locations should provide a primitive setting with opportunities for solitude, exploration, and learning with minimal amounts of human intervention such as signs or interpretive panels.

VISITOR FACILITIES

The visitor experience in these areas is heavily influenced by structures and other fabricated features, and they are part of the visitor experience. The pace is varied, with opportunities to walk and drive. The site often is noisy with vehicles and people nearby. Visitors have opportunities to hike, learn about resources, and receive many services from facilities. Visual distractions from other visitors and their vehicles are common and expected. Buildings and other facilities are predominant, but where exceptional natural elements or cultural elements are present, they are part of the visitor experience. The constructed features are coordinated by design to reduce the visual contrast with the natural or cultural setting. Although these are developed areas, they still offer a contrast from urban life and a chance to relax and enjoy the outdoors.

Most facilities are convenient and easily accessible by the public with little need for visitors to exert themselves, apply outdoor skills, or make a long-time commitment to see the area. Opportunities for adventure are relatively unimportant. Many areas provide a strong opportunity for social interaction. Encounters with NPS staff are frequent. The tolerance for social crowding is high but there are opportunities to learn and experience a change in pace from city life. Most facilities are accessible to visitors with disabilities. Resource impacts at visitor facilities are as low as possible, occurrences only when there is no practicable alternative. Visitors and facilities are intensively managed for resource protection, visitor management, and safety (that is, there are fences, law enforcement is intensive, and visitor activities are monitored or restricted).

PAVED AND GRADED ROADS

Paved and graded roads are the dominant experience for most visitors. Visitors use these narrow corridors and roadside pullouts for touring, enjoying scenic overlooks, and gaining access to natural and cultural features. While traveling, visitors may read about and understand the features they are seeing. Bicycle travel is allowed, but motorized vehicles are more common. Viewing the scenery is very important, but the views are often of distant landscapes. Vistas are protected. First-time visitors may have a sense of exploration, but little physical exertion is needed, and outdoor skills are not necessary. Visitors may spend a long time in this zone. The probability of encountering other visitors is high, although chances for social interaction are low except at roadside pullouts. The opportunity for direct contact with NPS staff is low unless emergency situations arise.

A moderate to high level of NPS management (highway signs, visitor protection) is needed to provide visitors with a safe and enjoyable experience. Because maintenance work and driving off-roads can cause dirt roads to grow wider, it is necessary to specify maximum road widths and approved pullouts. Roads are limited to specified widths unless where strong justification exists. Resources can be modified for essential visitors and administrative operational needs. The tolerance for resource degradation in these corridors is moderate. Allowable impacts are restricted to a short distance from roads and pullouts.

UNMAINTAINED DIRT AND FOUR-WHEEL DRIVE ROADS

Unmaintained dirt roads provide a unique experience for drivers and other users such as mountain bike riders, equestrians, and hikers. The predominant use is by visitors in vehicles driving to enjoy the scenery, or to go to historic mining sites, or to a specific feature. Some visitors experience a strong sense of exploration, challenge, and adventure. Travel speeds are slow to moderate, with the potential of frequent stops. Many of these roads offer a sense of being in the wilderness and give visitors a sense of escape from urban life. The areas through which these roads pass are predominantly natural, but there is some evidence of people having used the area in the past and present. Increased impacts from human use are prevented to protect the existing qualities of the landscape. Support features such as small directional signs or interpretive panels are present but infrequently seen and inconspicuous in character.

Visitors need to extend themselves, use outdoor skills, and make a large time commitment. Some roads with rough conditions require specific driving skills and more time to complete the route. Opportunities for challenge and adventure are available on some 2-wheel drive roads that require high clearance vehicles. Opportunities for social interaction are low, unless people are traveling in a group. A moderate level of management is provided on heavily used roads to protect resources and visitors. Most people who use these roads do not want to see many other vehicles.

Resource modification is evident, but where possible, it harmonizes with the natural environment. The preserve's tolerance for resource degradation in this zone is low except that limited signs, road surfaces and shoulders, pullouts, and camping areas are permitted. It is recognized that some 4-wheel drive roads have a number of short sections that have been widened through natural occurrences such as washouts.

PLANNING ISSUES AND MANAGEMENT CONCERNS

PLANNING PROCESS INCLUDING ISSUE SELECTION AND DEVELOPMENT OF ALTERNATIVES

In the early stages of this planning process, the planning team developed a list of issues from its own research and from input received from the Bureau of Land Management, National Park Service, and U.S. Fish and Wildlife Service, as well as from state, local, and other federal agencies and from the public through a series of public meetings held in September of 1995. An agency meeting was held in Barstow, California, and the public meetings were held in Baker, Barstow, Furnace Creek, Independence, Lone Pine, Needles, Pasadena, San Bernardino, and Ridgecrest, California, and in Las Vegas, Nevada. A summary of the scoping process and issues developed from the public and from intra-agency and interagency scoping meetings is in the “Consultation and Coordination” section.

The alternatives presented within this document address the options for dealing with the issues and information gathered during the scoping process. The planning team compiled and reviewed the information discussed at the scoping meetings and determined which issues were compatible with various laws, the National Park Service mission, and the purpose and significance of Mojave National Preserve and were therefore appropriate to be analyzed within this document. The process used to evaluate the scoping information primarily involved sorting the issues into categories. There were five categories:

- 1) Items that were statements or background information and not issues requiring analysis (for example, the National Park Service might need money or volunteers to maintain trails, the Barstow-Daggett airport needs to be expanded)
- 2) Issues that were operational and not suitable for discussion in a long term planning document included the need for more maps for the public.
- 3) Issues not within the National Park Service jurisdiction such as banning military aircraft from NPS units.
- 4) Issues considered but not suitable for analysis (see Planning Constraints and Mandates and Actions Considered As Alternatives But Rejected).
- 5) Issues appropriate for this planning effort’s analysis and discussion. These last issues are listed below and are described in detail in the alternative sections.

PLANNING PROCESS

Once the planning team identified those issues that could be addressed, the team took the following steps:

- became familiar with the planning area and its resources through the literature and tours of the planning area

- began development of a GIS database to be used in mapping and analyzing various factors
- resolved and developed the formats for the documents
- developed the NPS units' significance and purposes statements
- held open houses for BLM, Death Valley, and Mojave staff to update them on the planning team's progress
- met with local government representatives
- met with Timbisha-Shoshone, Ft. Mohave, Chemehuevi and San Manuel tribal members
- met numerous times with the Mojave National Preserve's Advisory Commission, Death Valley National Park's Advisory Commission, and the BLM Advisory Council
- met with staff of the University of California's Granite Mountains Natural Reserve
- developed the scope and direction for a contracted socioeconomic analysis
- identified the affected environment and described it in a written narrative

With the list of the issues identified, the planning staff developed conceptual alternatives. These concepts were sent to the public in a March 1997 newsletter. In April 1997 the planning staff held public workshops at the same locations as described in the above paragraph (with Bishop, California substituted for Independence). Participants at these workshops discussed the proposed alternatives with the planning team. Following public input, an agency meeting was held in Barstow in May 1997 to gather staff input. This input was used in preparation of this DEIS/GMP for Mojave National Preserve and the DEIS/GMP for Death Valley National Park. The Bureau of Land Management used the previously mentioned input in preparing its draft CDCA plan amendment/DEIS.

After public review of this document a final environmental impact statement (FEIS) will be prepared. A record of decisions will be prepared thirty days after release of the final environmental impact statement announcing the alternative chosen as the agency action. The National Park Service will also prepare stand-alone general management plans and land protection plans that are summary documents of the management direction, uncluttered by alternatives, impacts, and other information required as part of the National Environmental Policy Act process.

ISSUES IDENTIFIED DURING PUBLIC SCOPING

The following list of issues was derived from a series of public meetings throughout the planning area in September 1995 and from written comments received. The list is planning area wide and not specific to Mojave.

Visitor Use and Administration

- The public needs maps showing access, wilderness, desert tortoise critical habitat, land status and hunting areas.

- Careful consideration should be given to visitor service locations, including analysis of the use of private facilities outside NPS boundaries to provide certain visitor services. An evaluation of volunteer use should be included in the plan.
- Anticipate an increase in the Southern California and Las Vegas populations and prepare for increased use of the area while still providing a quality experience for visitors.
- Address policy on pets throughout planning area.

Interpretation

- Identify the anticipated visitors (including foreign tourists) and identify their needs and expectations while visiting the planning area.
- The need for visitor information and interpretation services for visitors on the trains that pass through the Preserve should be evaluated.
- The need for interpretation of significant resources and tours should be evaluated in the plan.

Public Safety, Dumps, and Utility Corridors

- Evaluate adequacy of communications, including emergency phones.
- Address the impacts and regulation of low flying aircraft.
- The scope of law enforcement, fire management and emergency medical services needs to be addressed.
- Address the existing and proposed dumps (e.g. Ward Valley, Yucca Mountain and Baker) in and around the planning area and their possible effects upon area resources.
- Examine the Department of Energy's nuclear waste transportation corridor plans.
- Evaluate a closed dump in Death Valley National Park for possible effects on existing and planned activities.
- Describe plans for future utility corridors within the planning area. If new corridors are planned, then compliance, monitoring and reduction of impacts to adjacent habitat need to be evaluated and discussed.
- Evaluate adequacy of public sanitation facilities.
- Address user fees and discrepancy between fees and costs of public safety activities such as search and rescue and Medivac services.

Socioeconomics

- A socioeconomic study should be conducted. It should, at a minimum, examine development activities within and adjacent to the planning area; examine effects of existing and predicted populations, expected economic benefits and costs; and provide an updated visitor profile.
- Evaluate potential concession operations, including jeep tours that could provide access to many people and a concession/permit system permitting access on closed trails.

- Examine possible land exchanges to consolidate federal lands and recommend boundary adjustments.
- Evaluate the transfer of Providence Mountains State Park to Mojave National Preserve.
- Be cognizant of inholders' concerns that the NPS's management policies and potential increases in visitation will effect inholders' property and lifestyles.
- Evaluate visible light pollution affects on the night sky.
- Structure plan so that phases can be implemented under different funding levels.
- Recommend a system for approving, supervising, and coordinating research activities in the planning area.
- Ensure that each agency's management practices remain faithful to their mission statements.
- The needs of foreign tourists should be understood and accommodated in the planning area.

Mining

- Address impacts from operating and abandoned mines in and near the planning area boundaries, reclamation and revegetation plans, and adequacy of existing mitigation measures.
- Describe how mining plans on valid existing mining claims are processed, with examples of previously approved NPS mining permits.

Springs, Water Rights and Air Quality

- Restoration of numerous springs is needed (e.g. Marl Springs) to make them suitable for wildlife.
- Consider the possible effects of BLM and NPS activities and regional developments (e.g. Stateline and Yucca Mountain) on water quality and quantity and vegetation.
- Address Department of the Interior leadership needed in resolving water issues, including adjudication.
- Address water resource issues (e.g. potential conflict of federal management objectives for Ash Meadows area)
- Address deteriorating air quality within the planning area.

Access

- The plan needs to address the issue of access related to valid existing rights, permitted uses, general recreation and maintenance of facilities such as range improvements, wildlife guzzlers, communications sites, private lands, etc.
- Mojave Road and the Heritage Trail should remain open.
- Clarify and discuss legal and physical requirements for private landowner access to inholdings in the Preserve.
- Consider the deletion, addition, maintenance, paving and overuse of roads throughout the planning area.

- Address possible wilderness boundary modifications to allow vehicle passage through closed sections of the Heritage Trail.
- Address the plans for general aviation and airports in the planning area.
- Consider Amtrak service at Kelso.
- Ivanpah Dry Lake should not be open for vehicles because it is a beautiful area.
- The Death Valley National Park's west side should have more access roads.

Military

- Address concerns about low level military aircraft overflights and fuel dumping by aircraft.
- Discuss impacts of Fort Irwin's proposed expansion on the planning area.

Wilderness, Camping, Non-Motorized Trails and Recreation

- Examine wilderness boundaries and access for possible adjustments.
- Address wilderness management guidelines and regulations regarding the maintenance and installation of big game and small game guzzlers in wilderness areas.
- Non-wilderness areas should remain open for multiple use and alternative areas should be provided for recreation opportunities no longer permitted in wilderness areas.
- Establish firewood and campfire policies.
- Look at campground location, numbers and the policies on group, handicapped, backcountry and roadside camping.
- Address the management policies and clothing optional policy at the Saline Valley Hot Springs (numerous written comments received supporting existing policy).
- Address the adequacy of trailhead parking (especially for wilderness areas), the number and length of trails, the maintenance of trails, and the need for single or multiple trails for bicycles, hikers and equestrians.
- Address various recreation opportunities, including hang-gliding, trail bicycles and rockhounding.
- Consider establishing carrying capacities and a planning area wide permitting system for heavily used areas.
- Address management issues regarding tour buses in the Preserve.

Biological Resources, Hunting and Grazing

- Address the NPS policy regarding guzzlers, recognizing the countless hours of volunteer work to install and maintain them, but also the implications of maintaining populations of wildlife artificially.
- Address possible decline of Death Valley's bighorn sheep and possibility that increased tourism will cause more adverse impacts to sheep and tortoise.
- Examine wild horse and burro management within planning area and each of its subunits and determine appropriate management policies for each area.

- Examine the hunting issue including access, visitor safety, elimination of trapping and non-game hunting and the importance of quail and chukar habitat.
- Address the issue of recreational shooting/plinking in the Preserve.
- Evaluate resource issue conflicts between grazing and wildlife habitat.
- Address grazing levels and long-term grazing management.
- Recognize that dolomite formations host many endemic plants.
- Address the recovery objectives for the desert tortoise established in the recovery plan.
- Recognize Death Valley's two new listed plants and address possible special management needs.
- Consider options for controlling exotic species (tamarisk and others).
- Address impacts of mining on endangered bats.

Cultural Resources and Native Americans

- Address Native American participation in the planning process.
- Consider the Mojave, Chemehuevi, and Timbisha Shoshone tribal values.
- Address cultural resources management issues (e.g. trace trails, rock art, military and mining sites) and establish policies for their preservation, protection, interpretation and appropriateness of revealing their location.
- Examine how parts of the planning area should be managed for their (Native American) spiritual values.
- Address possible hunting/religious conflicts.
- Address whether archeological sites be identified and interpreted for educational value or locations kept secret to protect resources.
- The identification, interpretation and possible restoration of some culturally significant resources (e.g. Tidewater Tonopah Railroad, Death Valley mine structures, military sites, Work Progress Administration guzzler sites, trails, cultural landscapes and Dinosaur Trackway) should be addressed within plan.
- Some cultural elements of the desert should be restored, such as certain features along Historic Route 66.
- Examine the potential use of Kelso Station as a visitor center for the preserve.

PLANNING CONSTRAINTS AND MANDATES

Many planning decisions are limited by existing legal mandates. Endangered species, historical and cultural resources, and clean water and air are some areas in which existing laws can limit planning options. The National Park Service's Organic Act and the 1994 California Desert Protection Act, the enabling legislation for Mojave National Preserve, define the planning parameters and the mission of the National Park Service and Mojave National Preserve in preserving natural resources for the enjoyment of this and future generations. Planning constraints and some of the above laws may appear to conflict. The proposed plan in this document is the planning effort's result in balancing these issues. Below are some specific examples of planning constraints in the CDPA.

- Grazing (sec. 510): The privilege of grazing domestic livestock on lands within the preserve shall continue to be exercised at no more than the current level, subject to applicable laws and NPS regulations.
- Hunting (sec. 506(b)): Hunting, fishing, and trapping will be permitted except in areas or at times for reasons of public safety, administration, or compliance with provisions of applicable law.
- Native American Access (sec. 705): The secretary will ensure access by Indian people for traditional cultural and religious purposes.
- Historical and Cultural Values (2)(b)(1)(C): The preserve will protect and preserve historical and cultural values of the California desert associated with the ancient Indian cultures, patterns of western exploration and settlement, and sites exemplifying the mining, ranching and railroad history of the old West.
- Land Withdrawal, Mining, and Validity (secs. 507, 508, 509): Other than existing valid mining claims (now subject to NPS regulations) no new claims are allowed within the preserve. Before approval of any mining operation plans, claims must be proven valid.
- Research and Education Facilities (secs. 513, 514): Granite Mountains Natural Reserve and Soda Springs Desert Study Center are designated research and educational centers within the preserve.
- Wilderness(sec. 601): Approximately 695,000 acres were designated as wilderness by Congress.
- Access to Private Property (sec. 708): The secretary will provide adequate access to lands or interests in lands not federally owned, which will provide the owner reasonable use and enjoyment.
- Rights-of-Way (sec. 511): Nothing in the CDPA shall have the effect of terminating any validly issued right-of-way or customary operation, maintenance, repair, and replacement activities in such right-of-way issued, granted, or permitted to various utility companies and Molycorp.
- Private lands (sec. 519): Lands not owned by the United States are not subject to regulations that apply only to federal lands. However, application of mineral development regulations (36 CFR Parts 9A and 9B) is not affected by this section.
- Reserved Water Rights (sec. 706): Congress has reserved a quantity of water sufficient to fulfill the purposes of the CDPA.

- **Military Overflights (sec. 802):** Nothing in CDPA shall restrict or preclude low-level overflights of military aircraft over new units of the national park or wilderness preservation systems (or any additions to existing units) including overflights that can be seen or heard within such units.

In addition to the above examples, the threatened desert tortoise serves as the final example of planning constraints. The U.S. Fish and Wildlife Service prepared a Recovery Plan for the desert tortoise in 1994. In that document, recommendations are presented for the federal land-managing agencies to implement to enhance the desert tortoise's recovery and subsequent removal from the threatened species list. These recommendations have resulted in restrictions on land use planning and activities throughout most of the preserve. Any proposed action that would cause harm to the tortoise or to its habitat is not permitted under the law without appropriate mitigating measures (see appendix E).

ACTIONS CONSIDERED FOR ALTERNATIVES BUT REJECTED

The following are suggestions received during the scoping process, which were considered but not evaluated or developed into alternatives:

1. Banning all grazing from NPS units
2. Banning hunting from Mojave National Preserve
3. Declaring the desert tortoise as a non-threatened species
4. Eliminating or reducing wilderness areas, or allowing motorized vehicles use on routes now in wilderness
5. Providing for a small, corralled herd of burros within NPS units
6. Allowing rock and gem collection
7. RS-2477 route determinations

The planning process was unable to address the first four actions, since to do so would directly violate various laws and be contrary to the goal of developing a management plan that meets the Congressional intent and the National Park Service mission. See the Planning Constraints and Mandates section above for a complete list.

U.S. Fish and Wildlife Service declared the desert tortoise a threatened species in 1990. Delisting the tortoise can only be accomplished by the U.S. Fish and Wildlife Service after evidence suggests that recovery goals have been met.

Wilderness can only be designated or modified by Congress.

The fifth and sixth issues are contrary to NPS policy or regulations. Regarding burros, it has been written policy of the National Park Service since 1920s that the purpose of NPS units does not include duplicating the legitimate function of other institutions in holding and exhibiting wild or domesticated animals for display. NPS policy is clear on the management of exotic species, such as burros, protection of natural resources, and

keeping animals confined for display. Keeping a small herd of burros would impact resources and cattle grazing and would be against these policies. Regarding rock hounding, this activity is prohibited by federal regulations (36 CFR 2.1 [1]).

RS-2477 is section 8 of the Mining Act of 1866. It states “The right-of-way for the construction of highways over public lands, not reserved for public uses, is hereby granted.” RS-2477 was repealed when the Federal Land Policy and Management Act (FLPMA) was passed on October 21, 1976. However, FLPMA did not terminate any existing “rights-of-way” granted under RS-2477. In 1993, the secretary of the interior issued a moratorium on the consideration of RS-2477 applications by the various agencies of the department. As a result of this moratorium, the National Park Service cannot consider any applications for RS-2477 rights-of-ways.

RELATIONSHIP TO OTHER PLANNING EFFORTS

In preparing this document the NEMO planning team strived to use the best available information and to coordinate with other planning efforts in adjacent areas. The NEMO planning team used the following documents as background information:

- the BLM’s 1980 *California Desert Conservation Area Plan* and its environmental impact statement and supporting documents
- the 1989 Death Valley National Monument *General Management Plan* and its 1994 Resource Management Plan
- the BLM’s 1994 *Las Vegas Resource Area Resource Management Plan*
- the U.S. Forest Service’s 1996 *Spring Mountains National Recreation Area Plan*
- the BLM’s 1997 *Environmental Impact Statement* for the proposed land acquisition by Army National Training Center at Fort Irwin
- BLM’s East Mojave Scenic Area plan

The NEMO planning team has also worked closely with the other planning efforts, including the Bureau of Land Management’s West Mojave Plan and Northern and Eastern Colorado Coordinated Planning Effort. Descriptions of these efforts follow:

WEST MOJAVE PLAN

The West Mojave Plan is a multiagency planning effort involving the Bureau of Land Management, the U.S. Fish and Wildlife Service, the California Department of Fish and Game (CDF&G), and local governments. The West Mojave Plan is developing habitat management alternatives that will recommend amendments to the BLM’s *California Desert Conservation Area Plan*. It is intended to provide for continued use and development within a 9.4-million-acre area of the western Mojave Desert of southern California in a manner that will ensure conservation of listed plant and animal species and minimize impacts on critical portions of their supporting habitats. The area extends from Olancho on the north to the San Gabriel and San Bernardino Mountains on the

south, and from Antelope Valley on the west to Twentynine Palms on the east. This planning area and NEMO share the same, respectively, eastern and western boundary.

The goals of the West Mojave Plan are to provide recovery of federally listed and state-listed plant and animal species as viable wild populations, to conserve critical elements of supporting habitats, to allow resource use and community expansion, and to simplify and reduce the regulatory burden of permitting processes for projects on public and private lands.

Two species that are especially targeted for management protection by this plan are the desert tortoise (*Gopherus agassizii*) and the Mohave ground squirrel (*Spermophilus mohavensis*).

The West Mojave plan report is still in the draft preparation stage, and details of the proposed or preferred amendments to the *California Desert Conservation Area Plan* are not yet available.

NORTHERN AND EASTERN COLORADO DESERT COORDINATED MANAGEMENT PLAN

This planning area is a 5.5 million-acre area that is south of the NEMO planning area. The following description of this planning effort is from the *Northern and Eastern Colorado Desert Coordinated Management Plan: Preparation Guide* prepared by the Bureau of Land Management in 1994.

The primary purpose of this plan is to provide for the recovery of the threatened Desert Tortoise that was listed as a threatened species by the U.S. Fish and Wildlife Service in 1990...The plan will implement the requirements of the U.S. Fish and Wildlife Service's Recovery Plan. The purpose is also to address management of the diversity of all plants and wildlife in ecosystem principles. This focus will address all plants and animals in a systems context (habitats) and selected species (i.e., about 30 flagship and special status species) in particular. Land users and managers will benefit through resolution of land use conflicts in a regional context and more efficient and consistent project review and processing.

The plan will set standards for managing desert tortoise, other special status species, and habitats within the planning area by defining zones and management prescriptions within and by which they will be managed indefinitely for their individual and interdependent qualities. Zones will also be identified for which Biodiversity values will not receive priority emphasis over other resource management programs. Routes of travel across public lands will be designated as open, closed or limited.

The final plan will function as a habitat management plan and will also amend the 1980 *California Desert Conservation Area Plan*.

LAS VEGAS RESOURCE MANAGEMENT PLAN

The *Stateline Resource Area Draft Resource Management Plan/Environmental Impact Statement* was released in 1992. Since then, the BLM renamed the Stateline Resource Area as the Las Vegas Field Office. The final EIS, entitled *Proposed Las Vegas Resource Management Plan and Final Environmental Impact Statement* was released in May 1998. This plan provides management guidance for about 3.7 million acres of public land administered by the Bureau of Land Management in the Las Vegas Field Area. The plan focuses on six management issues: land tenure, desert tortoise, mineral development, off-road vehicle use, special management area, areas of critical environmental concern (ACECs), and utility corridors.

SPRING MOUNTAINS NATIONAL RECREATION AREA PLAN

In 1996 the final management plan was prepared for Spring Mountains National Recreation Area (SMNRA). This plan, which amended the *Toiyabe National Forest Land and Resource Management Plan*, resulted in the following actions:

- unified management direction for the SMNRA under a single plan
- identified lands suitable for recreation development, mining, and other uses
- recommend changes in special area designations (wilderness, research natural areas, and scenic byways)
- established a SMNRA monitoring and evaluation program
- developed new management prescriptions and established two new management areas

FORT IRWIN PROPOSED LAND ACQUISITION

The proposed action is for more than 330,000 acres of lands north and west of the training center to be acquired for the National Training Center, Fort Irwin, California. These lands would be for the exclusive military use for force-on-force training of armored and mechanized brigades. Other alternatives call for variations of the proposed action and for the acquisition of lands to the east and south of Fort Irwin. The area needed for these alternatives range from about 180,000 acres to over 260,000 acres. Fort Irwin is adjacent to the NEMO planning area. Significant impacts on public access, visual aesthetics, air quality, soils, vegetation, wildlife, cultural resources, land use, wilderness quality, and transportation were analyzed in the EIS prepared for this action by the Bureau of Land Management.

WARD VALLEY (NUCLEAR DUMP) LOW LEVEL RADIOACTIVE WASTE DISPOSAL SITE

The Ward Valley Project south of I-40 and Mojave National Preserve near the California–Nevada Border and about 25 miles west of Needles, California, is proposed as

a storage site for subsurface-level radioactive waste. This project has been approved by the state of California and awaits the federal government's final approval.

Under the Low-Level Radioactive Waste (LLRW) Policy Act of 1980, the state is responsible for licensing a private company to develop and operate the facility. U.S. Ecology, Inc., as license-designee, is proposing an LLRW facility at Ward Valley.

The 1,000-acre site is on BLM-managed federal land. The project would consist of a 90-acre disposal and support facilities area, a roadway, and a utility corridor. The rest of the area is intended as a buffer zone. As part of the action, property ownership would be transferred from the Bureau of Land Management to the State of California.

The proposed project would provide for the permanent disposal of low-level radioactive waste, including radionuclides with short half-lives. These wastes would be disposed of in containers placed in trenches and covered with soil. No hazardous wastes, hazardous low-level radioactive waste, high-level radioactive wastes, or nuclear weapons-related wastes would be accepted. It is expected that the project would receive low-level radioactive waste generated from four states for a period of 30 years, after which the site would close. After closure, the State of California would maintain the site for a period of 100 years. A final environmental impact report / environmental impact statement has been prepared for this project (Dames & Moore, 1991).

Because of this proposed facility's location near Needles, it is expected that construction workers and some supplies and equipment would come from Needles. During operations, the number of LLRW truck shipments coming through Barstow would average about 13 (26 round trips) per week.

CASTLE MOUNTAIN PROPOSED MINE EXPANSION

Viceroy Gold Corporation, the operator of Castle Mountain Mine, which is adjacent to the eastern boundary of the preserve, proposes to expand its mining operation by increasing areas of open-pit mining, creating an overburden storage site, and expanding the existing heap leach pad by 485 acres. Back-filling of the mine pits is proposed on about 158 acres. The mine operating period would be extended 10 years past the currently permitted time, to the year 2010. Mining and processing methods and rates would not change. However, the operator proposes to reduce the frequency of monitoring wells from draw-downs due to the mining operations. At the conclusion of mining operations, the total surface area disturbed would be 1,375 acres.

MOLYCORP INC. PROPOSED MINE EXPANSION AND HAZARDOUS SPILL STATUS

Two projects involving Molycorp Inc., a subsidiary of UNOCAL, are occurring adjacent to the Preserve boundary. An environmental impact report/environmental impact statement for a proposed mining operation expansion is currently being prepared.

Molycorp mine is located at Mountain Pass, California, along I-15 adjacent to Mojave National Preserve.

Besides the proposed mine expansion, between July and August of 1996, an estimated 230,000 gallons of pipe scale and waste effluents were released at nine separate locations along the 14-mile-long waste pipeline that runs through Mojave National Preserve and the BLM Needles Resource Area. The releases were associated with the pigging (cleaning) of the pipeline. The pipeline runs from a lanthanide rare earth mining/processing plant in Mountain Pass, California, to Ivanpah Dry Lake Bed near the California–Nevada state line adjacent to I-15. The product released from the pipeline, which is owned and maintained by Molycorp, contains radioactive radium, thorium, and uranium, as well as lead and arsenic.

The releases occurred in critical habitat for the threatened desert tortoise. The cleanup was being managed under a unified command by an interagency type II incident management team. Among the agency representatives to the team are personnel from the California Department of Fish and Game, which has jurisdiction over the coordination of hazardous materials incidents in California. Other cooperating agencies are the California Department of Health Service's Radiological Health Branch and Department of Toxic Substances Control, the regional water quality board, and the county fire and hazardous materials department. Costs to date are estimated to be \$3 million; they will probably reach \$7 million by the time the cleanup is completed. To date, 56 tortoises have been relocated from the incident site, and more than 20,000 feet of tortoise exclusion fencing has been installed. The removal of the release materials is critical to maintaining the quality of the aquifer and preventing further dispersal by wind.

AT&T COAXIAL CABLE REMOVAL PROJECT

AT&T owns and maintains about 709 miles of coaxial communications cable and associated equipment between Socorro, New Mexico, and Mojave, California. This cable runs through the entire width of Mojave National Preserve. This system consists of a coaxial cable, repeater huts, manholes, cable marker posts, and other electronic equipment. AT&T proposes to remove about 220 miles of the above-mentioned system. Construction activities are expected to start in August and will take about five months to complete. A *Draft Environmental Impact Statement* on this project was released for public review in December 1997 and the *Final Environmental Impact Statement* was released in May 1998.

FUTURE PLANNING EFFORTS

As a result of efforts made to date, additional NPS planning documents have been identified as being needed to supply detailed information for specific topics. Additional planning efforts that may be undertaken over the next ten years include:

- interpretive plan
- resource management plan

- water resource management plan
- fire management plan
- road management plan
- grazing management plan
- maintenance management plan
- backcountry/wilderness management plan
- communication management plan
- fee study plan
- development concept plan for Hole-in-the-Wall
- inventorying and monitoring plan
- cave management plan
- development concept plan for Soda Springs